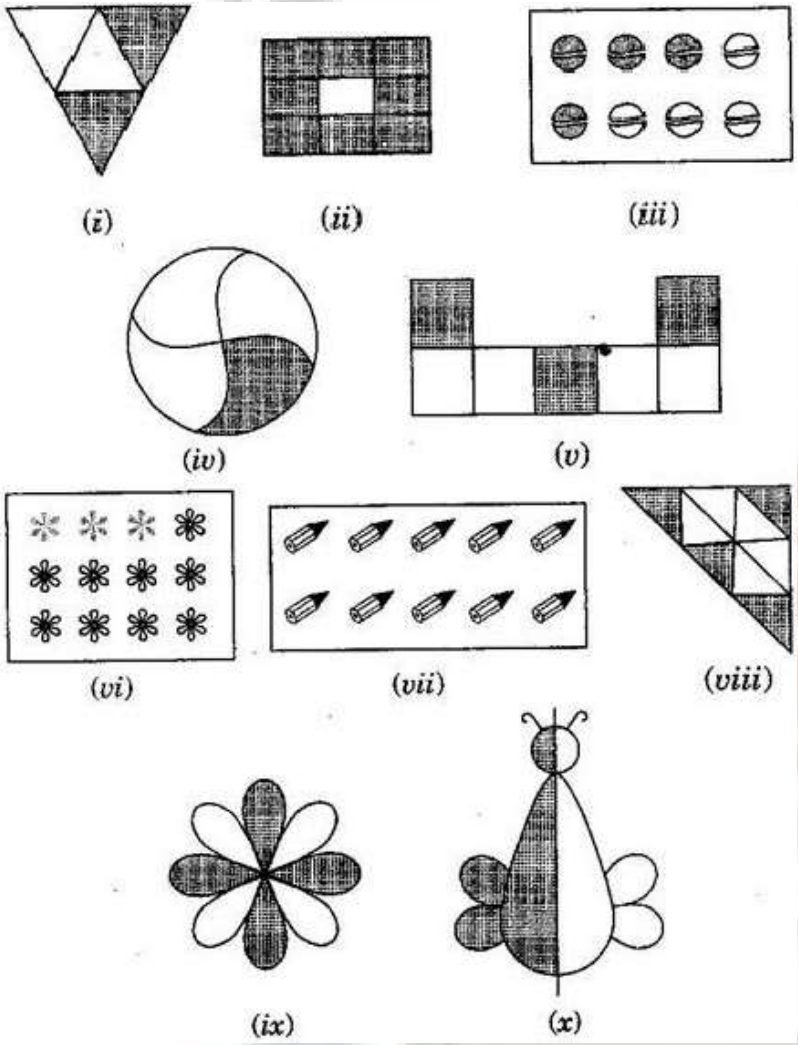
CLASS-6 **Chapter - 7 Fraction** **SUB: MATHS**

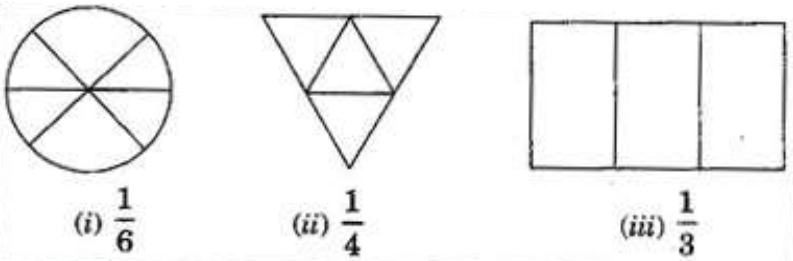
Ex. 7.1

Question 1. Write the fraction representing the shaded portion:

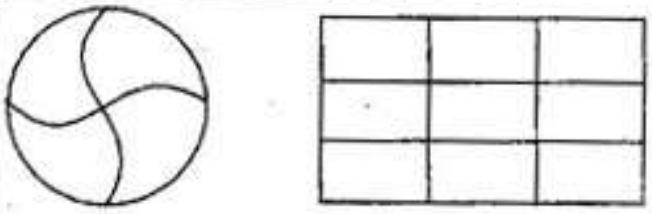


Answer: (i) $\frac{2}{4}$ (ii) $\frac{8}{9}$ (iii) $\frac{4}{8}$ (iv) $\frac{1}{4}$ (v) $\frac{3}{7}$
(vi) $\frac{9}{12}$ (vii) $\frac{10}{10}$ (viii) $\frac{4}{9}$ (ix) $\frac{4}{8}$ (x) $\frac{1}{2}$

Question 2. Color the part according to the given fraction:

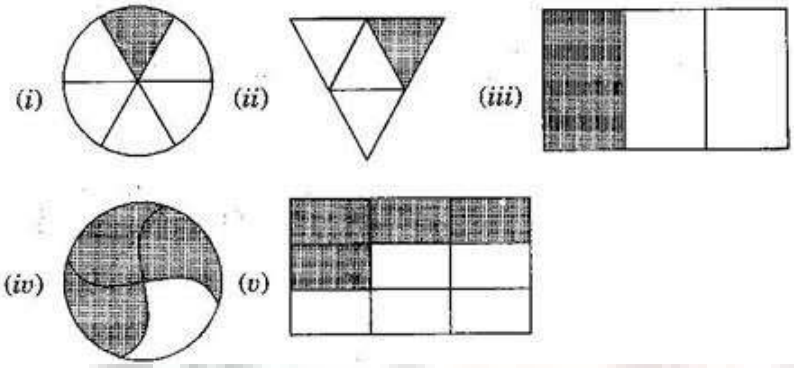


(i) $\frac{1}{6}$ (ii) $\frac{1}{4}$ (iii) $\frac{1}{3}$



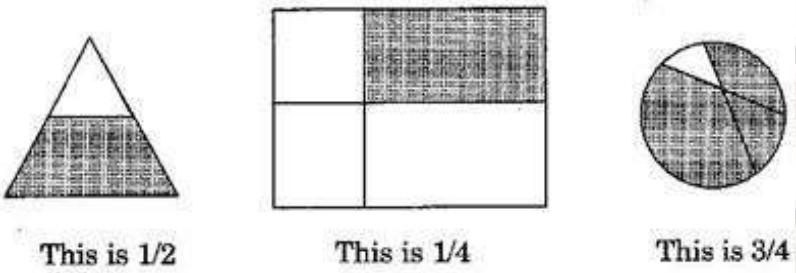
(iv) $\frac{3}{4}$ (v) $\frac{4}{9}$

Answer:



(i) (ii) (iii) (iv) (v)

Question 3. Identify the error, if any?



This is 1/2 This is 1/4 This is 3/4

Answer: All the figures are not equally divided. For making fractions, it is necessary that figure is divided into equal parts.

Question 4. What fraction of a day is 8 hours?

Answer: Since, 1 day = 24hours.

Therefore, the fraction of 8 hours = $\frac{8}{24} = \frac{1}{3}$

Question 5. What fraction of an hour is 40 minutes?

Answer: Since, 1 hour = 60 minutes.

Therefore, the fraction of 40 minutes = $\frac{40}{60} = \frac{2}{3}$

Question 6. Arya, Abhimanyu and Vivek shared lunch. Arya has brought two sandwiches, one made of vegetable and one of jam. The other two boys forgot to bring their lunch. Arya agreed to share his sandwiches so that each person will have an equal share of each sandwich.

(a)How can Arya divide his sandwiches so that each person has an equal share? (b)What part of a sandwich will each boy receive?

Answer:(a) Arya will divide each sandwich into three equal parts and give one part of each sandwich to each one of them.

(b) $1 \times \frac{1}{3} = \frac{1}{3}$

Question 7. Kanchan dyes dresses. She had to dye 30 dresses. She has so far finished 20 dresses. What fraction of dresses has she finished?

Answer: Total number of dresses to dye= 30

Work completed = 20

Fraction of completed work = $\frac{20}{30} = \frac{2}{3}$

Question 8. Write the natural numbers from 2 to 12. What fraction of them are prime numbers?

Answer: Natural numbers from 2 to 12: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Prime numbers from 2 to 12: 2, 3, 5, 7, 11

Hence, fraction of prime numbers = $\frac{5}{11}$

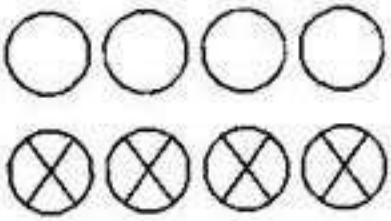
Question 9. Write the natural numbers from 102 to 113. What fraction of them is prime number?

Answer: Natural numbers from 102 to 113: 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113

Prime numbers from 102 to 113: 103, 107, 109, 113

Hence fraction of prime numbers = $\frac{4}{12} = \frac{1}{3}$

Question 10. What fraction of these circles has 'X's in them?



Answer: Total number of circles = 8 and number of circles having 'X' = 4 Hence,

the fraction = $\frac{4}{8}$

Question 11. Kristin received a CD player for her birthday. She bought 3 CDs and received 5 others as gifts. What fraction of her total CDs did she buy and what fraction did she receive as gifts?

Answer: Total number of CDs = 3 + 5 = 8

Number of CDs purchased = 3

Fraction of CDs purchased = $\frac{3}{8}$

Fraction of CDs received as gifts = $\frac{5}{8}$

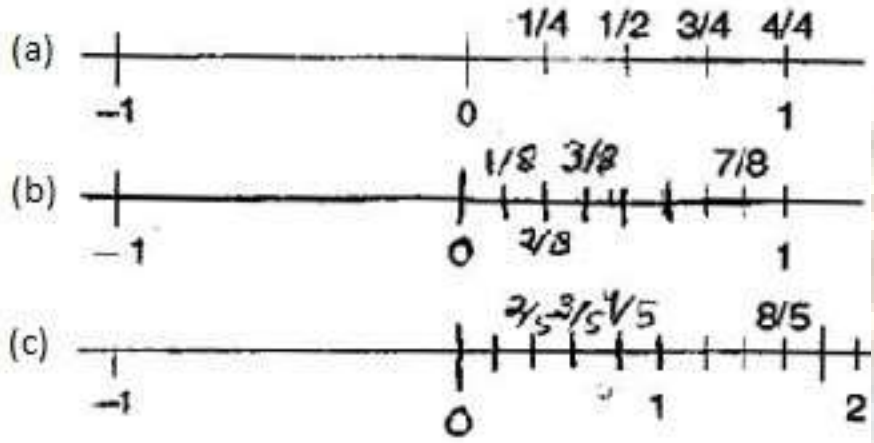
Ex. 7.2)

Question 1. Draw number lines and locate the points on them: (a) $\frac{1}{2}, \frac{1}{4}, \frac{3}{4}, \frac{4}{4}$

(b) $\frac{1}{8}, \frac{3}{8}, \frac{7}{8}$

(c) $\frac{2}{5}, \frac{3}{5}, \frac{4}{5}, \frac{8}{5}$

Answer:



Question 2. Express the following fractions as mixed fractions:

(a) $\frac{20}{3}$ (b) $\frac{11}{5}$ (c) $\frac{17}{7}$ (d) $\frac{28}{5}$ (e) $\frac{19}{6}$ (f) $\frac{35}{9}$

Answer: (a)

$$3\overline{)20}\ \begin{array}{l}6\\ -18\\ \hline 2\end{array}$$

$\frac{20}{3} = 6\frac{2}{3}$

(b)

$$
\begin{array}{r}
2 \\
5\overline{)\ 11\ (} \\
10 \\
\hline
1 \\
\hline
\end{array}
$$

$\therefore \frac{11}{5} = 2\frac{1}{5}$

(c)

$$
\begin{array}{r}
2 \\
7\overline{)\ 17\ (} \\
14 \\
\hline
3 \\
\hline
\end{array}
$$

$\therefore \frac{17}{7} = 2\frac{3}{7}$

(d)

$$
\begin{array}{r}
5 \\
5\overline{)\ 28\ (} \\
25 \\
\hline
3 \\
\hline
\end{array}
$$

$\therefore \frac{28}{5} = 5\frac{3}{5}$

(e)

$$
\begin{array}{r}
3 \\
6\overline{)\ 19\ (} \\
18 \\
\hline
1 \\
\hline
\end{array}
$$

$\frac{19}{6} = 3\frac{1}{6}$

(f)

$$9\overline{)\,35\,(\,3}$$
$$\underline{27}$$
$$8$$

$\therefore \frac{35}{9} = 3\frac{8}{9}$

Question 3. Express the following as improper fractions:

(a) $7\frac{3}{4}$ (b) $5\frac{6}{7}$ (c) $2\frac{5}{6}$ (d) $10\frac{3}{5}$ (e) $9\frac{3}{7}$ (f) $8\frac{4}{9}$

Answer: (a) $7\frac{3}{4} = \frac{(7\times4)+3}{4} = \frac{28+3}{4} = \frac{31}{4}$

(b) $5\frac{6}{7} = \frac{(5\times7)+6}{7} = \frac{35+6}{7} = \frac{41}{7}$

(c) $2\frac{5}{6} = \frac{(2\times6)+5}{6} = \frac{12+5}{6} = \frac{17}{6}$

(d) $10\frac{3}{5} = \frac{(10\times5)+3}{5} = \frac{50+3}{5} = \frac{53}{5}$

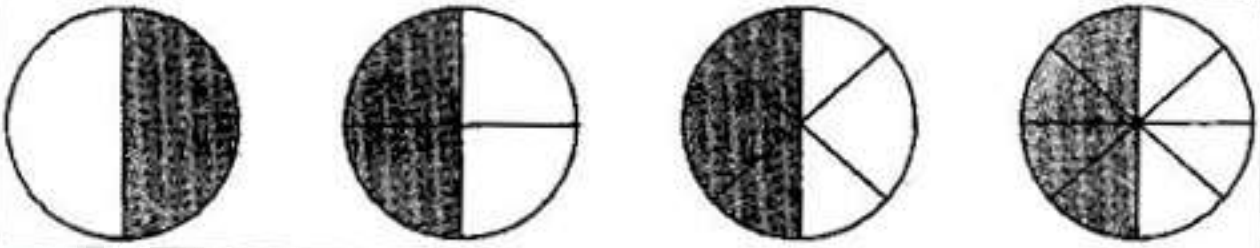
(e) $9\frac{3}{7} = \frac{(9\times7)+3}{7} = \frac{63+3}{7} = \frac{66}{7}$

(f) $8\frac{4}{9} = \frac{(8\times9)+4}{9} = \frac{72+4}{9} = \frac{76}{9}$

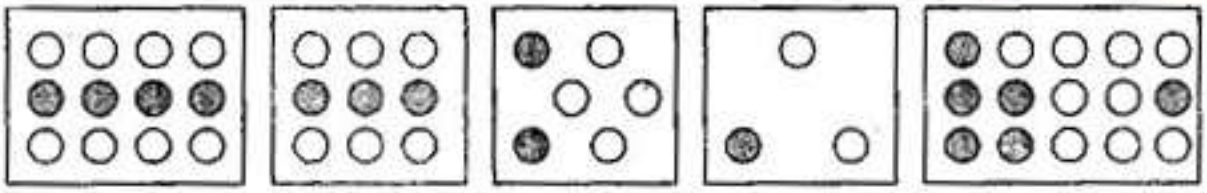
Ex. 7.3

Question 1. Write the fractions. Are all these fractions

equivalent: (a)



(b)



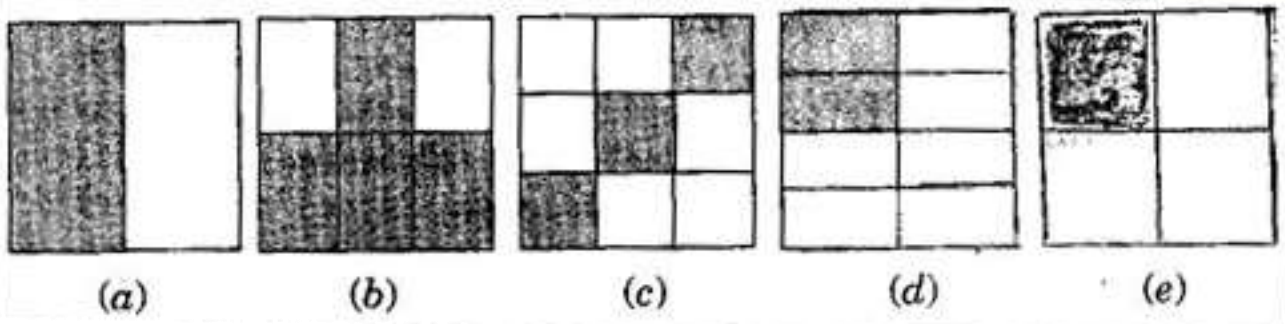
Answer: (a) $\frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \frac{4}{8}$

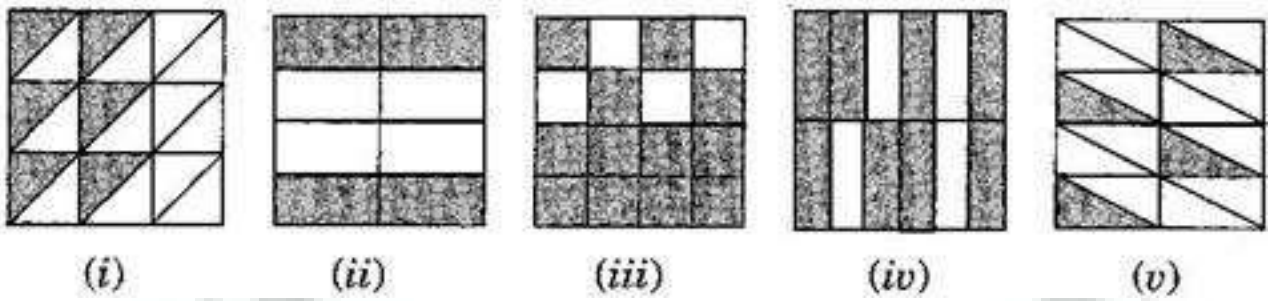
Yes, all of these fractions are e equivalent

b. $\frac{4}{12}, \frac{3}{9}, \frac{2}{6}, \frac{1}{3}, \frac{6}{15}$

No, these fractions are not equivalent.

Question 2. Write the fraction and pair up the equivalent fractions to each row:





(i) (ii) (iii) (iv) (v)

Answer: (a) $\frac{1}{2}$

(ii) $\frac{4}{8} = \frac{1}{2}$

(b) $\frac{4}{6} = \frac{2}{3}$

(iv) $\frac{8}{12} = \frac{2}{3}$

(c) $\frac{3}{9} = \frac{1}{3}$

(i) $\frac{6}{18} = \frac{1}{3}$

(d) $\frac{2}{8} = \frac{1}{4}$

(v) $\frac{4}{16} = \frac{1}{4}$

(e) $\frac{1}{4}$

(iii) $\frac{12}{16}$

Question 3. Replace $\square$ in each of the following by the correct number:

(a) $\frac{2}{7} = \frac{8}{\square}$

(b) $\frac{5}{8} = \frac{10}{\square}$

(c) $\frac{3}{5} = \frac{\square}{20}$

(d) $\frac{45}{60} = \frac{15}{\square}$

(e) $\frac{18}{24} = \frac{\square}{4}$

Answer: (a) $\frac{2}{7} = \frac{2 \times 4}{7 \times 4} = \frac{8}{\boxed{28}}$

(b) $\frac{5}{8} = \frac{5 \times 2}{8 \times 2} = \frac{10}{\boxed{16}}$

(c) $\frac{3}{5} = \frac{3 \times 4}{5 \times 4} = \frac{\boxed{12}}{20}$

(d) $\frac{45}{60} = \frac{45 \div 3}{60 \div 3} = \frac{15}{\boxed{20}}$

(e) $\frac{18}{24} = \frac{18 \div 6}{24 \div 6} = \frac{\boxed{3}}{4}$

Question 4. Find the equivalent fraction of $\frac{3}{5}$ having:

(a) denominator 20

(b) numerator 9

(c) denominator 30

(d) numerator 27

Answer: (a) $\frac{3}{5} = \frac{3 \times 4}{5 \times 4} = \frac{12}{20}$

(b) $\frac{3}{5} = \frac{3 \times 3}{5 \times 3} = \frac{9}{15}$

(c) $\frac{3}{5} = \frac{3 \times 6}{5 \times 6} = \frac{18}{30}$

(d) $\frac{3}{5} = \frac{3 \times 9}{5 \times 9} = \frac{27}{45}$

Question 5. Find the equivalent fraction of $\frac{36}{48}$ with:

(a) numerator 9

(b) denominator 4

Answer: (a) $\frac{36}{48} = \frac{36 \div 4}{48 \div 4} = \frac{9}{12}$

(b) $\frac{36}{48} = \frac{36 \div 12}{48 \div 12} = \frac{3}{4}$

Question 6. Check whether the given fraction is equivalent:

(a) $\frac{5}{9}, \frac{30}{54}$

(b) $\frac{3}{10}, \frac{12}{50}$

(c) $\frac{7}{13}, \frac{5}{11}$

Answer: (a) $\frac{5}{9}, \frac{30}{54} = \frac{5\times6}{9\times6}, \frac{30}{54} = \frac{30}{54}, \frac{30}{54}$

Therefore, $\frac{5}{9}, \frac{30}{54}$ are equivalent.

(b) $\frac{3}{10}, \frac{12}{50} = \frac{3\times5}{10\times5}, \frac{12}{50} = \frac{15}{50}, \frac{12}{50}$

Therefore, $\frac{3}{10}, \frac{12}{50}$ are not equivalent.

(c) $\frac{7}{13}, \frac{5}{11} = \frac{7\times11}{13\times11}, \frac{5\times13}{11\times13} = \frac{77}{143}, \frac{65}{143}$

Therefore, $\frac{7}{13}, \frac{5}{11}$ are not equivalent fraction.

Question 7. Reduce the following fractions to simplest form:

(a) $\frac{48}{60}$

(b) $\frac{150}{60}$

(c) $\frac{84}{98}$

(d) $\frac{12}{52}$

(e) $\frac{7}{28}$

Answer: (a) $\frac{48}{60} = \frac{2\times2\times2\times2\times3}{2\times2\times3\times5} = \frac{4}{5}$

(b) $\frac{150}{60} = \frac{3\times5\times10}{2\times3\times10} = \frac{5}{2}$

(c) $\frac{84}{98} = \frac{2\times3\times14}{7\times14} = \frac{6}{7}$

(d) $\frac{12}{52} = \frac{2\times2\times3}{2\times2\times13} = \frac{3}{13}$

(e) $\frac{7}{28} = \frac{7}{2 \times 2 \times 7} = \frac{1}{4}$

Question 8. Ramesh had 20 pencils, Sheelu had 50 pencils and Jamaal had 80 pencils. After 4 months, Ramesh used up 10 pencils, Sheelu used up 25 pencils and Jamaal used up 40 pencils. What fraction did each use up? Check whether each has used an equal fraction of her/his pencils?

Answer: Ramesh: Total pencils = 20

Pencils used = 10

Fraction $\frac{10}{20} = \frac{1}{2}$

Sheelu: Total pencils =

50 Pencils used = 25

Fraction = $\frac{25}{50} = \frac{1}{2}$

Jamaal: Total pencils =

80 Pencils used = 40

Fraction = $\frac{40}{80} = \frac{1}{2}$

Since, all of them used half of their pencils, therefore each one of them used equal fraction of pencils.

Question 9. Match the equivalent fractions and write two more for each:

(i) $\frac{250}{400}$	(a) $\frac{2}{3}$
(ii) $\frac{180}{200}$	(b) $\frac{2}{5}$
(iii) $\frac{660}{990}$	(c) $\frac{1}{2}$
(iv) $\frac{180}{360}$	(d) $\frac{5}{8}$
(v) $\frac{220}{550}$	(e) $\frac{9}{10}$

Answer: (i) $\frac{250}{400} = \frac{5}{8}, \frac{10}{16}, \frac{15}{24}$

(d) $\frac{5}{8}$

(ii) $\frac{180}{200} = \frac{9}{10}, \frac{18}{20}, \frac{27}{30}$

(e) $\frac{9}{10}$

(iii) $\frac{660}{990} = \frac{2}{3}, \frac{4}{6}, \frac{6}{9}$

(a) $\frac{2}{3}$

(iv) $\frac{180}{360} = \frac{1}{2}, \frac{2}{4}, \frac{3}{6}$

(c) $\frac{1}{2}$

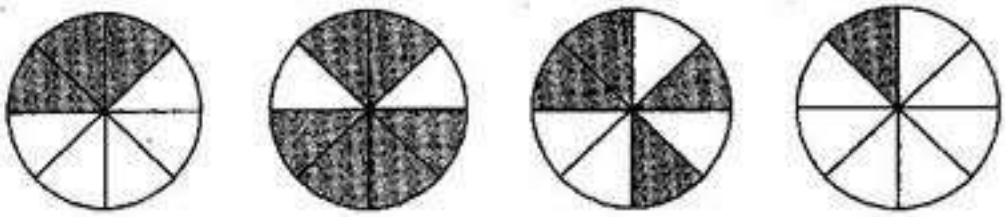
(v) $\frac{220}{550} = \frac{2}{5}, \frac{4}{10}, \frac{6}{15}$

(b) $\frac{2}{5}$

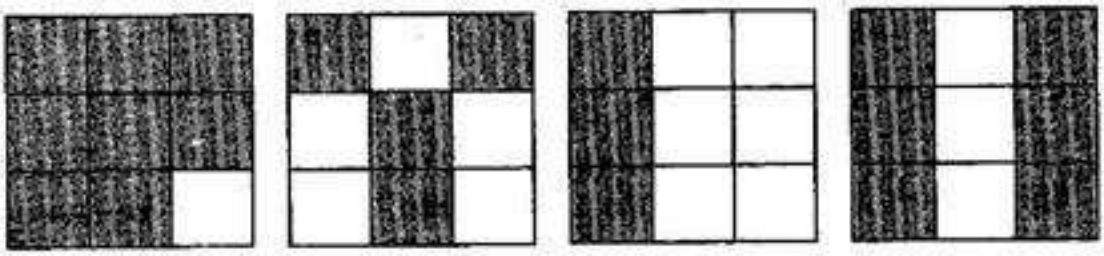
Ex. 7.4

Question 1. Write shaded portion as fraction. Arrange them in ascending and descending order using correct sign '<', '>', '=' between the fractions:

(a)



(b)



(c) Show $\frac{2}{6}, \frac{4}{6}, \frac{8}{6}$ and $\frac{6}{6}$ on the number line. Put appropriate signs between the fractions given:

$\frac{5}{6} \square \frac{2}{6}$, $\frac{3}{6} \square 0$,

$\frac{1}{6} \square \frac{6}{6}$, $\frac{8}{6} \square \frac{5}{6}$

Answer: (a) $\frac{3}{8}, \frac{6}{8}, \frac{4}{8}, \frac{1}{8}$

Ascending order: $\frac{1}{8} < \frac{3}{8} < \frac{4}{8} < \frac{6}{8}$

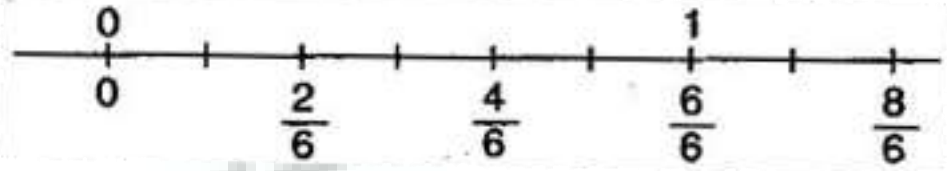
Descending order: $\frac{6}{8} > \frac{4}{8} > \frac{3}{8} > \frac{1}{8}$

(b) $\frac{8}{9}, \frac{4}{9}, \frac{3}{9}, \frac{6}{9}$

Ascending order: $\frac{3}{9} < \frac{4}{9} < \frac{6}{9} < \frac{8}{9}$

Descending order: $\frac{8}{9} > \frac{6}{9} > \frac{4}{9} > \frac{3}{9}$

(c) Number line



$\frac{5}{6} > \frac{2}{6}$ $\frac{1}{6} < \frac{6}{6}$

$\frac{3}{6} > \frac{0}{6}$ $\frac{8}{6} > \frac{5}{6}$

Question 2. Compare the fractions and put an appropriate sign:

(a) $\frac{3}{6} \square \frac{5}{6}$

(b) $\frac{1}{7} \square \frac{1}{4}$

(c) $\frac{4}{5} \square \frac{5}{5}$

(d) $\frac{3}{5} \square \frac{3}{7}$

Answer: (a) $\frac{3}{6} < \frac{5}{6}$

(b) $\frac{1}{7} < \frac{1}{4}$

(c) $\frac{4}{5} < \frac{5}{5}$

(d) $\frac{3}{5} > \frac{3}{7}$

Question 3. Make five more pairs and put appropriate signs.

Answe:(a) $\frac{9}{10} > \frac{6}{10}$

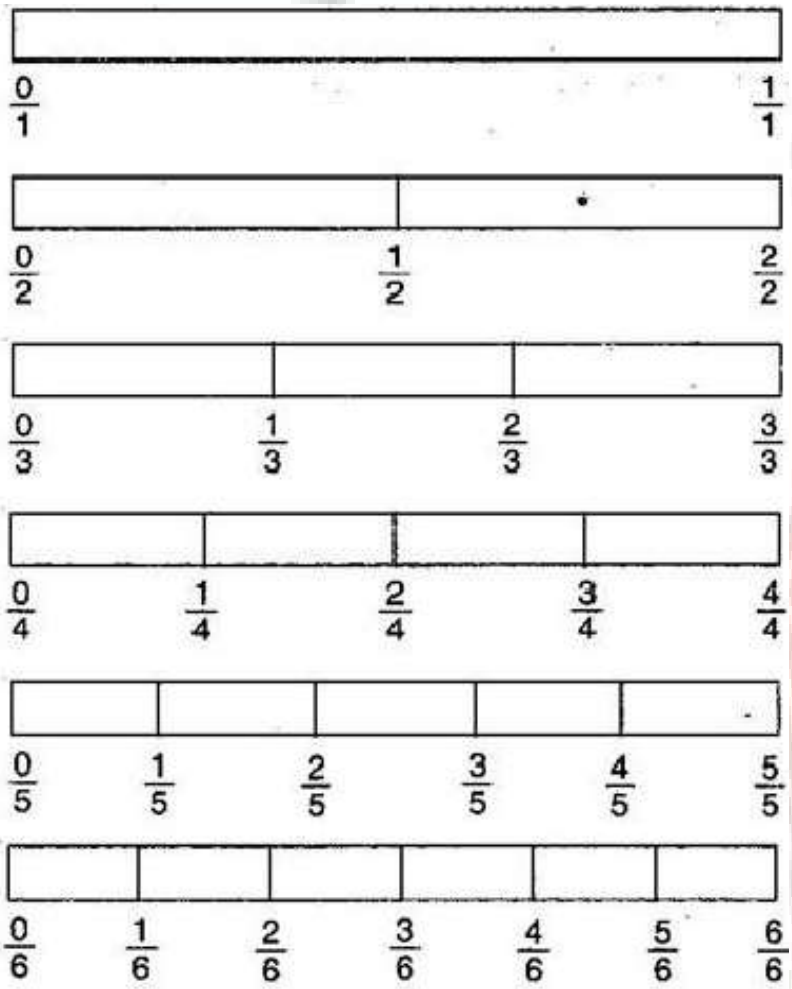
(b) $\frac{1}{3} > \frac{1}{6}$

(c) $\frac{1}{8} < \frac{1}{5}$

(d) $\frac{7}{8} < \frac{11}{8}$

(e) $\frac{11}{13} \boxed{>} \frac{9}{13}$

Question 4. Look at the figures and write '<' or '>' between the given pairs of fractions:



(a) $\frac{1}{6} \square \frac{1}{3}$

(b) $\frac{3}{4} \square \frac{2}{6}$

(c) $\frac{2}{3} \square \frac{2}{4}$

(d) $\frac{6}{6} \square \frac{3}{3}$

(e) $\frac{5}{6} \square \frac{5}{5}$

Make five more such problems and solve them with your friends.

Answer:(a) $\frac{1}{6}\boxed{<}\frac{1}{3}$

(b) $\frac{3}{4}\boxed{>}\frac{2}{6}$

(c) $\frac{2}{3}\boxed{>}\frac{2}{4}$

(d) $\frac{6}{6}\boxed{=}\frac{3}{3}$

(e) $\frac{5}{6}\boxed{<}\frac{5}{5}$

Five more such problems:

(a) $\frac{1}{2}\square\frac{3}{6}$

(b) $\frac{2}{3}\square\frac{3}{5}$

(c) $\frac{3}{4}\square\frac{4}{6}$

(d) $\frac{5}{6}\square\frac{2}{2}$

(e) $\frac{0}{1}\square\frac{0}{6}$

Sol. (a) $\frac{1}{2}\boxed{=}\frac{3}{6}$

(b) $\frac{2}{3}\boxed{>}\frac{3}{5}$

(c) $\frac{3}{4}\boxed{>}\frac{4}{6}$

(d) $\frac{5}{6}\boxed{<}\frac{2}{2}$

(e) $\frac{0}{1}\boxed{=}\frac{0}{6}$

Question 5. How quickly can you do this? Fill appropriate sign (<, =, >):

(a) $\frac{1}{2}\square\frac{1}{5}$

(b) $\frac{2}{4}\square\frac{3}{6}$

(c) $\frac{3}{5}\square\frac{2}{3}$

(d) 3/4 ___ 2/8

(e) $\frac{3}{5} \square \frac{6}{5}$

(f) $\frac{7}{9} \square \frac{3}{9}$

(g) $\frac{1}{4} \square \frac{2}{8}$

(h) $\frac{6}{10} \square \frac{4}{5}$

(i) $\frac{3}{4} \square \frac{7}{8}$

(j) $\frac{6}{10} \square \frac{4}{5}$

(k) $\frac{5}{7} \square \frac{15}{21}$

Answer:(a) $\frac{1}{2} \boxed{>} \frac{1}{5}$

(b) $\frac{2}{4} \boxed{=} \frac{3}{6}$

(c) $\frac{3}{5} \boxed{<} \frac{2}{3}$

(d) $\frac{3}{4} \boxed{>} \frac{2}{8}$

(e) $\frac{3}{5} \boxed{<} \frac{6}{5}$

(f) $\frac{7}{9} \boxed{>} \frac{3}{9}$

(g) $\frac{1}{4} \boxed{=} \frac{2}{8}$

(h) $\frac{6}{10} \boxed{<} \frac{4}{5}$

(i) $\frac{3}{4} \boxed{<} \frac{7}{8}$

(j) $\frac{6}{10} \boxed{<} \frac{4}{5}$

(k) $\frac{5}{7} \boxed{=} \frac{15}{21}$

Question 6. The following fractions represent just three different numbers. Separate them into three groups of equivalent fractions, by changing each one to its simplest form:

(a) $\frac{2}{12}$

(b) $\frac{3}{15}$

(c) $\frac{8}{50}$

(d) $\frac{16}{100}$

(e) $\frac{10}{60}$

(f) $\frac{15}{75}$

(g) $\frac{12}{60}$

(h) $\frac{16}{96}$

(i) $\frac{12}{75}$

(j) $\frac{12}{72}$

(k) $\frac{3}{18}$

(l) $\frac{4}{25}$

Answer: (a) $\frac{2}{12} = \frac{1}{6}$

(b) $\frac{3}{15} = \frac{1}{5}$

(c) $\frac{8}{50} = \frac{4}{25}$

(d) $\frac{16}{100} = \frac{4}{25}$

(e) $\frac{10}{60} = \frac{1}{6}$

(f) $\frac{15}{75} = \frac{1}{5}$

(g) $\frac{12}{60} = \frac{1}{5}$

(h) $\frac{16}{96} = \frac{1}{6}$

(i) $\frac{12}{75} = \frac{4}{25}$

(j) $\frac{12}{72} = \frac{1}{6}$

(k) $\frac{3}{18} = \frac{1}{6}$

(l) $\frac{4}{25} = \frac{4}{25}$

Equivalent groups:

I group: $\frac{1}{5}$ [(b), (f), (g)]

II group: $\frac{1}{6}$ [(a), (e), (h), (j), (k)]

III group: $\frac{4}{25}$ [(c), (d), (i), (l)]

Question 7. Find answers to the following. Write and indicate how you solved them:

(a) $\frac{5}{9}$ Is equal to $\frac{4}{5}$?

(b) $\frac{9}{16}$ Is equal to $\frac{5}{9}$?

(c) $\frac{4}{5}$ Is equal to $\frac{16}{20}$?

(d) Is $\frac{1}{15}$ equal to $\frac{4}{30}$?

Answer: (a) $\frac{5}{9}$ and $\frac{4}{5}$

$\Rightarrow \frac{5 \times 5}{9 \times 5} = \frac{25}{45}$ And $\frac{4 \times 9}{5 \times 9} = \frac{36}{45}$ [$\because$ L.C.M. of 9 and 5 is 45]

Since, $\frac{25}{45} \neq \frac{36}{45}$

Therefore, $\frac{5}{9} \neq \frac{4}{5}$

(b) $\frac{9}{16}$ and $\frac{5}{9}$

$\Rightarrow \frac{9\times9}{16\times9} = \frac{81}{144}$ and $\frac{5\times16}{9\times16} = \frac{80}{144}$ [$\because$ L.C.M. of 16 and 9 is 144]

Since, $\frac{81}{144} \neq \frac{80}{144}$

Therefore, $\frac{9}{16} \neq \frac{5}{9}$

(c) $\frac{4}{5}$ and $\frac{16}{20}$

$\Rightarrow \frac{4\times20}{5\times20} = \frac{80}{100}$ and $\frac{16\times5}{20\times5} = \frac{80}{100}$ [$\because$ L.C.M. of 5 and 20 is 100]

Since, $\frac{80}{100} = \frac{80}{100}$

Therefore, $\frac{4}{5} = \frac{16}{20}$

(d) $\frac{1}{15}$ and $\frac{4}{30}$

$\Rightarrow \frac{1\times2}{15\times2} = \frac{2}{30}$ and $\frac{4\times1}{30\times1} = \frac{4}{30}$ [$\because$ L.C.M. of 15 and 30 is 30]

Since, $\frac{2}{30} \neq \frac{4}{30}$

Therefore, $\frac{1}{15} \neq \frac{4}{30}$

Question 8. Ila read 25 pages of a book containing 100 pages. Lalita read $\frac{2}{5}$ of the same book. Who read less?

Answer: Ila read 25 pages out of 100 pages.

Fraction of reading the pages = $\frac{25}{100} = \frac{1}{4}th$ part of book

Lalita read $\frac{2}{5}th$ part of book = $\frac{40}{100}$ pages

Since $\frac{1}{4} < \frac{2}{5}$

Therefore, Ila read less.

Question 9. Rafiq exercised for $\frac{3}{6}$ of an hour, while Rohit exercised for $\frac{3}{4}$ of an hour. Who exercised for a longer time?

Answer: Rafiq exercised $\frac{3}{6}$ of an hour.

Rohit exercised $\frac{3}{4}$ of an hour.

Since $\frac{3}{4} > \frac{3}{6}$

Therefore, Rohit exercised for a longer time.

Question 10. In a class A of 25 students, 20 passed in first class; in another class B of 30 students, 24 passed in first class. In which class was a greater fraction of students getting first class?

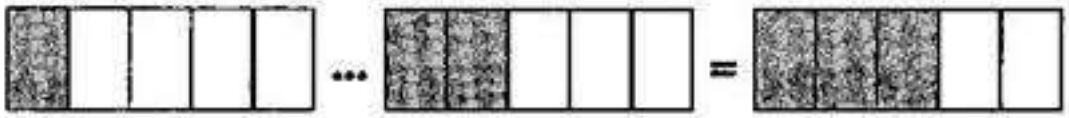
Answer: In class A, 20 passed out of 25, i.e., $\frac{20}{25} = \frac{4}{5}$

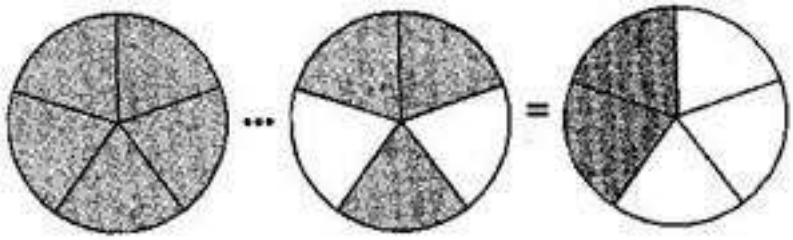
In class B, 24 passed out of 30, i.e., $\frac{24}{30} = \frac{4}{5}$

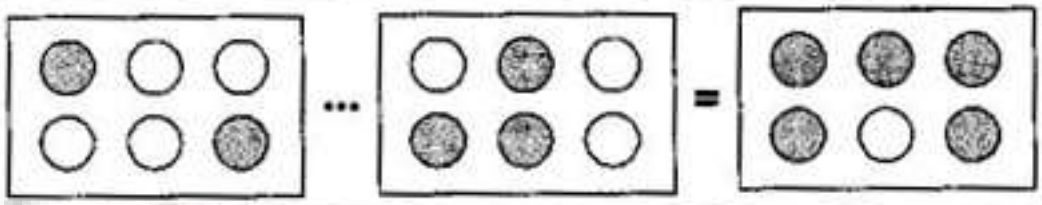
Hence, each class have same fraction of student getting first class.

Ex. 7.5

Question 1. Write the fractions appropriately as additions or subtractions

(a) 

(b) 

(c) 

Answer: (a) $\frac{1}{5} + \frac{2}{5} = \frac{1+2}{5} = \frac{3}{5}$

(b) $\frac{5}{5} - \frac{3}{5} = \frac{5-3}{5} = \frac{2}{5}$

(c) $\frac{2}{6} + \frac{3}{6} = \frac{2+3}{6} = \frac{5}{6}$

Question 2. Solve:

(a) $\frac{1}{18} + \frac{1}{18}$

(b) $\frac{8}{15} + \frac{3}{15}$

(c) $\frac{7}{7} - \frac{5}{7}$

(d) $\frac{1}{22} + \frac{21}{22}$

(e) $\frac{12}{15} - \frac{7}{15}$

(f) $\frac{5}{8} + \frac{3}{8}$

(g) $1 - \frac{2}{3}\left(1 = \frac{3}{3}\right)$

(h) $\frac{1}{4} + \frac{0}{4}$

(i) $3 - \frac{12}{5}$

Answer: (a) $\frac{1}{18} + \frac{1}{18} = \frac{1+1}{18} = \frac{2}{18} = \frac{1}{9}$

(b) $\frac{8}{15} + \frac{3}{15} = \frac{8+3}{15} = \frac{11}{15}$

(c) $7/7 - 75 = \frac{7-5}{7} = \frac{2}{7}$

(d) $\frac{1}{22} + \frac{21}{22} = \frac{1-21}{22} = \frac{22}{22} = 1$

(e) $\frac{12}{15} - \frac{7}{15} = \frac{12-7}{15} = \frac{5}{15} = \frac{1}{3}$

(f) $\frac{5}{8} + \frac{3}{8} = \frac{8}{8} = 1$

(g) $1 - \frac{2}{3} = \frac{3}{3} - \frac{2}{3} = \frac{3-2}{2} = \frac{1}{3}$

(h) $\frac{1}{4} + \frac{0}{4} = \frac{1-0}{4} = \frac{1}{4}$

(i) $3 - \frac{12}{5} = \frac{15}{5} - \frac{12}{5} = \frac{15-12}{5} = \frac{3}{5}$

Question 3. Shubham painted $\frac{2}{3}$ of the wall space in his room. His sister Madhavi helped and painted $\frac{1}{3}$ of the wall space. How much did they paint together?

Answer: Fraction of the wall painted by Shubham = $\frac{2}{3}$

Fraction of the wall painted by Madhavi = $\frac{1}{3}$

Total painting done by both of them = $\frac{2}{3} + \frac{1}{3} = \frac{2+1}{3} = \frac{3}{3} = 1$

Therefore, they painted the wall completely.

Question 4. Fill in the missing fractions: (a)

$\frac{7}{10} - \square = \frac{3}{10}$

(b) $\square - \frac{3}{21} = \frac{5}{21}$

(c) $\square - \frac{3}{6} = \frac{3}{6}$

(d) $\square + \frac{5}{27} = \frac{12}{27}$

Answer: (a) $\frac{4}{10}$

(b) $\frac{8}{21}$

(c) $\frac{6}{6}$

(d) $\frac{7}{27}$

Question 5.Javed was given a basket of 7 oranges, He sold only 5 oranges. What fraction of oranges was left in the basket?

Answer: Total = 1

Fraction of Orange left = $1 - \frac{5}{7}$

= $\frac{7}{7} - \frac{5}{7} = \frac{7-5}{7} = \frac{2}{7}$

Thus, $\frac{2}{7}$ an orange was left in the basket.

Ex. 7.6

Question 1. Solve:

(a) $\frac{2}{3} + \frac{1}{7}$

(b) $\frac{3}{10} + \frac{7}{15}$

(c) $\frac{4}{9} + \frac{2}{7}$

(d) $\frac{5}{7} + \frac{1}{3}$

(e) $\frac{2}{5} + \frac{1}{6}$

(f) $\frac{4}{5} + \frac{2}{3}$

(g) $\frac{3}{4} - \frac{1}{3}$

(h) $\frac{5}{6} - \frac{1}{3}$

(i) $\frac{2}{3} + \frac{3}{4} + \frac{1}{2}$

(j) $\frac{1}{2} + \frac{1}{3} + \frac{1}{6}$

(k) $\frac{1}{3} + 3\frac{2}{3}$

(l) $4\frac{2}{3} + 3\frac{1}{4}$

(m) $\frac{16}{5} - \frac{7}{5}$

(n) $\frac{4}{3} - \frac{1}{2}$

Answer: (a) L.C.M. of 3 and 7 is 21

$\therefore \frac{2}{3} + \frac{1}{7} = \frac{2\times7+1\times3}{21} = \frac{14+3}{21} = \frac{17}{21}$

(b) L.C.M. of 10 and 15 is 30

$\therefore \frac{3}{10} + \frac{7}{15} = \frac{3\times3+7\times2}{30} = \frac{9+14}{30} = \frac{23}{30}$

(c) L.C.M. of 9 and 7 is 63

$\therefore \frac{4}{9}+\frac{2}{7}=\frac{4\times7+2\times9}{63}=\frac{28+18}{63}=\frac{46}{63}$

(d) L.C.M. of 7 and 3 is 21

$\therefore \frac{5}{7}+\frac{1}{3}=\frac{5\times3+7\times1}{21}=\frac{15+7}{21}=\frac{22}{21}=1\frac{1}{21}$

(e) L.C.M. of 5 and 6 is 30

$\therefore \frac{2}{5}+\frac{1}{6}=\frac{2\times6+5\times1}{30}=\frac{12+5}{30}=\frac{17}{30}$

(f) L.C.M. of 5 and 3 is 15

$\therefore \frac{4}{5}+\frac{2}{3}=\frac{4\times3+2\times5}{15}=\frac{12+10}{15}=\frac{22}{15}=1\frac{7}{15}$

(g) L.C.M. of 4 and 3 is 12

$\therefore \frac{3}{4}-\frac{1}{3}=\frac{3\times3-4\times1}{12}=\frac{9-4}{12}=\frac{5}{12}$

(h) L.C.M. of 6 and 3 is 6

$\therefore \frac{5}{6}-\frac{1}{3}=\frac{5\times1-2\times1}{6}=\frac{5-2}{6}=\frac{3}{6}=\frac{1}{2}$

(i) L.C.M. of 3, 4 and 2 is 12

$\therefore \frac{2}{3}+\frac{3}{4}+\frac{1}{2}=\frac{2\times4+3\times3+1\times6}{12}=\frac{6+9+6}{12}=\frac{23}{12}=1\frac{11}{12}$

(j) L.C.M. of 2, 3, and 6 is 6

$\therefore \frac{1}{2}+\frac{1}{3}+\frac{1}{6}=\frac{1\times3+1\times2+1\times1}{6}=\frac{3+2+1}{6}=\frac{6}{6}=1$

(k) L.C.M. of 3 and 3 is 3

$\therefore \frac{4}{3}+\frac{11}{3}=\frac{4+11}{3}=\frac{15}{3}=5$

(l) L.C.M. of 3 and 4 is 12

$\therefore \frac{14}{3}+\frac{13}{4}=\frac{14\times4+13\times3}{12}=\frac{56+39}{12}=\frac{95}{12}=7\frac{11}{12}$

(m) L.C.M. of 5 and 5 is 5

$\therefore \frac{16}{5} - \frac{7}{5} = \frac{16-7}{5} = \frac{9}{5} = 1\frac{4}{5}$

(n) L.C.M. of 3 and 2 is 6

$\therefore \frac{4}{3} - \frac{1}{2} = \frac{4\times2-1\times3}{6} = \frac{8-3}{6} = \frac{5}{6}$

Question 2. Sarika bought $\frac{2}{5}$ meter of ribbon and Lalita $\frac{3}{4}$ meter of ribbon. What is the total length of the ribbon they bought?

Answer: Ribbon bought by Sarita $\frac{2}{5}$ m and Ribbon bought by Lalita $\frac{3}{4}$ m

Total length of the ribbon $\frac{2}{5} + \frac{3}{4}$ = $\frac{2\times4+5\times3}{20}$ [∵ L.C.M. of 5 and 4 is 20]

$= \frac{8+15}{20} = \frac{23}{20} = 1\frac{3}{20}$ m

Therefore, they bought $1\frac{3}{20}$ m of ribbon.

Question 3. Naina was given $1\frac{1}{2}$ piece of cake and Najma was give $\frac{1}{3}$ piece of cake. Find the total amount of cake given to both of them.

Answer: Cake taken by Naina = $1\frac{1}{2}$ piece and Cake taken by Najma = $\frac{1}{3}$ piece

Total cake taken $= 1\frac{1}{2} + \frac{1}{3} = \frac{3}{2} + \frac{4}{3}$ = $\frac{3\times3+4\times2}{6}$ [∵ L.C.M. of 2 and 3 is 6]

$= \frac{9+8}{6} = \frac{17}{6} = 2\frac{5}{6}$

Therefore total consumption of cake is $2\frac{5}{6}$.

Question 4. Fill in the boxes:

(a) $\square - \frac{5}{8} = \frac{1}{4}$

(b) $\square - \frac{1}{5} = \frac{1}{2}$

(c) $\frac{1}{2} - \square = \frac{1}{6}$

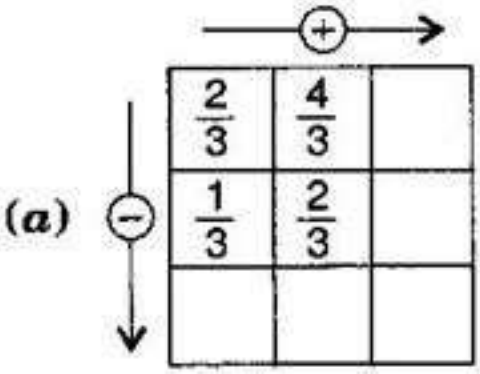
Answer: (a) $\frac{1}{4} + \frac{5}{8} = \frac{2+5}{8} = \frac{7}{8}$

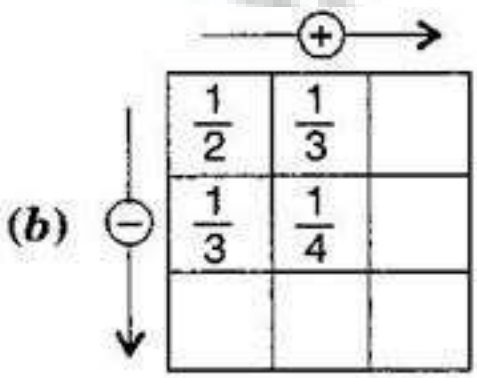
$\frac{1}{2} + \frac{1}{5} = \frac{5+2}{10} = \frac{7}{10}$

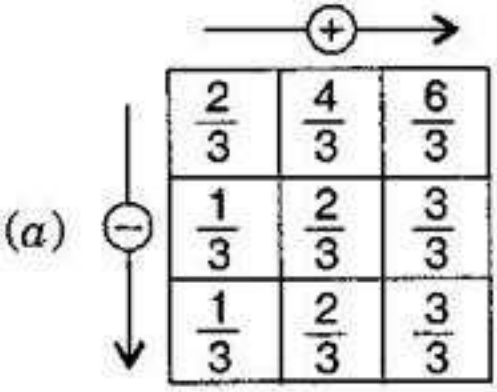
(b) _ = =

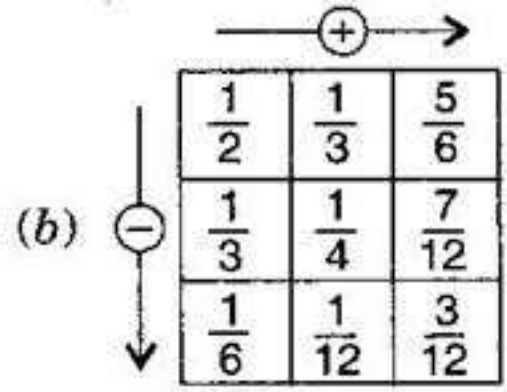
(c) $\frac{1}{2} - \frac{1}{6} = \frac{3-1}{6} = \frac{2}{6}$

Question 5. Complete the addition – subtraction box:









Answer:

Question 6. A piece of wire $\frac{7}{8}$ meter long broke into two pieces. One piece was $\frac{1}{4}$ meter long. How long is the other piece?

Answer: Total length of wire $\frac{7}{8}$

Length of first part $= \frac{1}{4}$ meter

Remaining part $= \frac{7}{8} - \frac{1}{4} = \frac{7 \times 1 - 2 \times 1}{8}$ [L.C.M. of 8 and 4 is 8]

$= \frac{7-2}{8} = \frac{5}{8}$ meter

Therefore, the length of remaining part is $\frac{5}{8}$ meter.

Question 7. *Nan*dini house is $\frac{9}{10}$ km from her school. She walked some distance and then took a bus for ½ km to reach the school. How far did she walk?

Answer: Total distance between the school and house $= \frac{9}{10}$ km

Distance covered by bus $\frac{1}{2}$ km

Remaining distance $= \frac{9}{10} - \frac{1}{2} = \frac{9 \times 1 - 1 \times 5}{10}$ ∵[L.C.M. of 10 and 2 is 10]

$= \frac{9-5}{10} = \frac{4}{10} = \frac{2}{5}$ km

Therefore, distance covered by walking us $\frac{2}{5}$ km.

Question 8. Asha and Samuel have bookshelves of the same size partly filled with books. Asha $\frac{5}{6}th$'s shelf is full and Samuel's $\frac{2}{5}th$ shelf is 2/5th'S full. Whose bookshelf is more filled and by what fraction?

Answer: $\frac{5}{6}$ and $\frac{2}{5}$

$\Rightarrow \frac{5}{6} \times \frac{5}{5} = \frac{25}{30}$ and $\frac{2}{5} \times \frac{6}{6} = \frac{12}{30}$ ∵[L.C.M. of 6 and 5 is 30]

$\because \frac{25}{30} > \frac{12}{30} \Rightarrow \frac{5}{6} > \frac{2}{5}$

∴ Asha's bookshelf is more covered than Samueal.

Difference $= \frac{25}{30} - \frac{12}{30} = \frac{13}{30}$

Question 9. Jaidev takes $2\frac{1}{5}$ minutes to walk across the school ground. $\frac{7}{4}$ Rahul takes minutes to do the same. Who takes less time and by what fraction?

Answer: Time taken by Jaidev $= 2\frac{1}{5}$ minutes $= \frac{11}{5}$

$\frac{7}{4}$ minute Time taken by Rahul =

$\frac{11}{5}$ $\frac{7}{4}$ $\frac{11 \times 4 - 7 \times 5}{20}$ minutes

Difference = — - = '[' L.C.M. of 5 and 4 is 20]

$\frac{44-35}{20} = \frac{9}{20}$ minutes

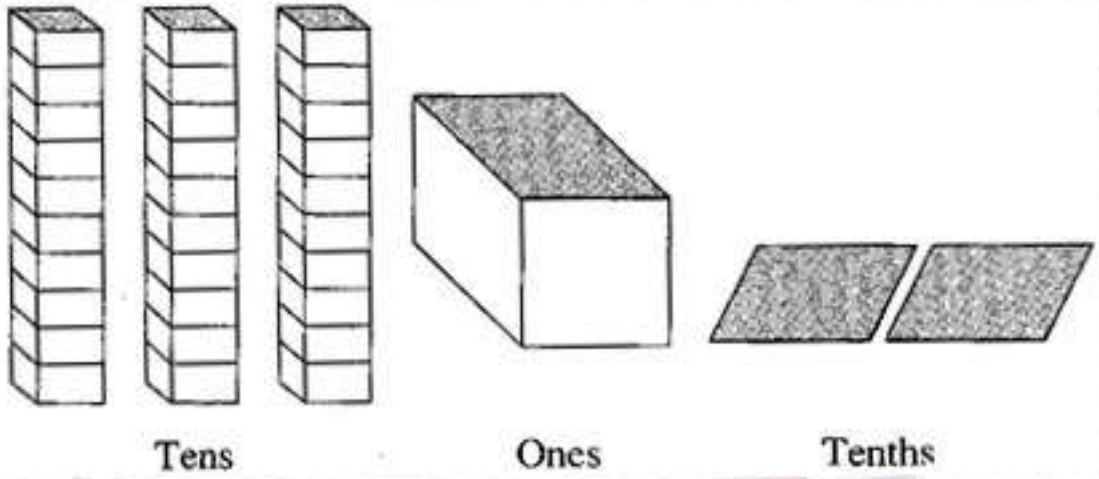
Thus, Rahul takes less time, which is $\frac{9}{20}$ minutes.

CLASS-6 **Chapter 8 Data handling** SUB-MATHS

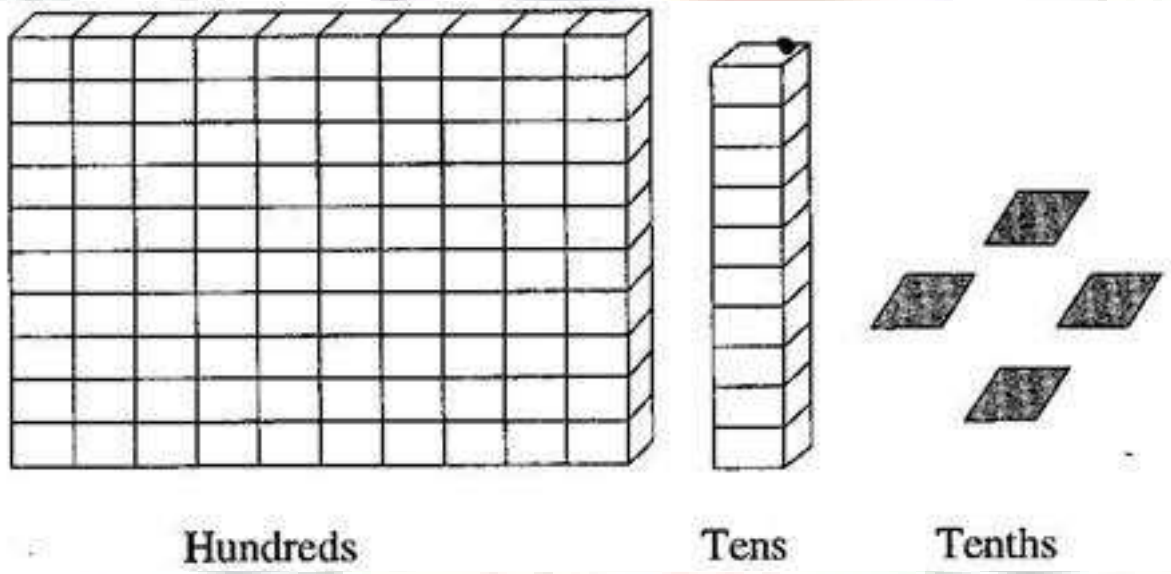
Ex. 8.1

Question 1. Write the following as numbers in the given table:

(a)



(b)



Hundreds (100)	Tens (10)	Ones (1)	Tenths $\left(\frac{1}{10}\right)$	Number
0	3	1	2	31.2
1	1	0	4	110.4

Question 2. Write the following decimals in the place value table:

(a) 19.4

(b) 0.3

(c) 10.6

(d)

205.9

Answer: (a)

Hundreds	Tens	Once	Tenths
0	1	9	4

(b)

Hundreds	Tens	Once	Tenths
0	0	0	3

(c)

Hundreds	Tens	Once	Tenths
0	1	0	6

(d)

Hundreds	Tens	Once	Tenths
2	0	5	9

Question 3. Write each of the following as decimals:

(a) seven-tenths

(b) Two tens and nine-tenths

(c) Fourteen point six

(d) One hundred and two-ones

(e) Six hundred point eight

Answer: (a) seven-tenths = 7 tenths = $\frac{7}{10}$ = 0.7

(b) 2 tens and 9-tenths = 2 x 10 + $\frac{9}{10}$ = 20 + 0.9 =20.9

(c) Fourteen point six =14.6

(d) One hundred and 2-ones = 100 + 2 x 1 = 100 + 2 = 102

(e) Six hundred point eight = 600.8

Question 4. Write each of the following as decimals:

(a) $\frac{5}{10}$

(b) $3 + \frac{7}{10}$

(c) $200 + 60 + 5 + \frac{1}{10}$

(d) $70 + \frac{8}{10}$

(e) $\frac{88}{10}$

(f) $4\frac{2}{10}$

(g) $\frac{3}{2}$

(h) $\frac{2}{5}$

(i) $\frac{12}{5}$

(j) $3\frac{3}{5}$

(k) $4\frac{1}{2}$

(f) Two tens and nine-tenths

(g) Fourteen point six

(h) One hundred and two-ones

(i) Six hundred point eight

Answer: (a) seven-tenths = 7 tenths = $\frac{7}{10}$ = 0.7

(b) 2 tens and 9-tenths = 2 x 10 + $\frac{9}{10}$ = 20 + 0.9 = 20.9

(c) $200 + 60 + 5 + \frac{1}{10}$ = 200 + 60 + 5 + 0.1 = 265.1

(d) $70 + \frac{8}{10}$ = 70 + 0.8 = 70.8

(e) $\frac{88}{10} = \frac{80+8}{10} = \frac{80}{10} + \frac{8}{10} = 8 + \frac{8}{10}$ = 8 + 0.8 = 8.8

(f) $4\frac{2}{10} = 4 + \frac{2}{10}$ = 4 + 0.2 = 4.2

(g) $\frac{3}{2} = \frac{3 \times 5}{2 \times 5} = \frac{15}{10} = \frac{10+5}{10} = \frac{10}{10} + \frac{5}{10}$ = 1 + 0.5 = 1.5

(h) $\frac{2}{5} = \frac{2 \times 2}{5 \times 2} = \frac{4}{10}$ = 0.4

(i) $\frac{12}{5} = \frac{12 \times 2}{5 \times 2} = \frac{24}{10} = \frac{20+4}{10} = \frac{20}{10} + \frac{4}{10}$ = 2 + 0.4 = 2.4

(j) $3\frac{3}{5} = 3 + \frac{3}{5} = 3 + \frac{3 \times 2}{5 \times 2} = 3 + \frac{6}{10}$ = 3 + 0.6 = 3.6

(k) $4\frac{1}{2} = 4 + \frac{1}{2} = 4 + \frac{1 \times 5}{2 \times 5} = 4 + \frac{5}{10}$ = 4 + 0.5 = 4.5

Question 5. Write the following decimals as fraction. Reduce the fractions to lowest terms:

(a) 0.6

(b) 2.5

(c) 1.0

(d) 3.8

(e) 13.7

(f) 21.2

(g) 6.4

Answer: (a) 0.6 = 6/10 = 3/5

(b) 2.5 = 25/10 = 5/2

(c) 1.0 = $\frac{10}{10}$ = 1

(d) 3.8 = $\frac{38}{10} = \frac{19}{5}$

(e) 13.7 = $\frac{137}{10}$

(f) $21.2 = \frac{212}{10}$ = $\frac{106}{5}$

(g) 6.4 = $\frac{64}{10} = \frac{32}{5}$

Question 6. Express the following as cm using decimals:

(a) 2 mm

(b) 30 mm

(c) 116 mm

(d) 4 cm 2 mm

(e) 162 mm

(f) 83 mm

Answer: (a) ∵ 10 mm = 1 cm

∴ 1 mm = $\frac{1}{10}$ cm

∴ 2 mm = $\frac{1}{10}$ x 2 = 0.2 cm

(b) ∵ 10 mm = 1 cm

$\therefore$ 1 mm = $\frac{1}{10}$ cm

$\therefore$ 30 mm = $\frac{1}{10}$ x 30 = 3.0 cm

(c) $\because$ 10 mm = 1 cm

$\therefore$ 1 mm = $\frac{1}{10}$ cm

$\therefore$ 116 mm = $\frac{1}{10}$ x 116 = 11.6 cm

(d) 4 cm + $\frac{2}{10}$ cm [$\because$ 10 mm = 1 cm]

4 + 0.2 = 4.2 cm

(e) $\because$ 10 mm = 1 cm

$\therefore$ 1 mm = $\frac{1}{10}$ cm

$\therefore$ 162 mm = $\frac{1}{10}$ x 162 = 16.2 cm

(f) 10 mm = 1 cm 1

$\therefore$ mm = $\frac{1}{10}$ cm

$\therefore$ 83 mm = $\frac{1}{10}$ x 83 = 8.3 cm

Question 7. Between which two whole numbers on the number line are the given numbers lie? Which of these whole numbers is nearer to the given number?

(a) 0.8

(b) 5.1

(c) 2.6

(d) 6.4

(e) 9.1

(f) 4.9

Answer: (a) From 0 to 1, 0.8 is nearest to 1.

(b) From 5 to 6, 5.1 is nearest to 5.

(c) From 2 to 3, 2.6 is nearest to 3.

(d) From 6 to 7, 6.4 is nearest to 6.

(e) From 9 to 10, 9.1 is nearest to 9.

(f) From 4 to 5, 4.9 is nearest to 5.

Question 8. Show the following numbers on the number line:

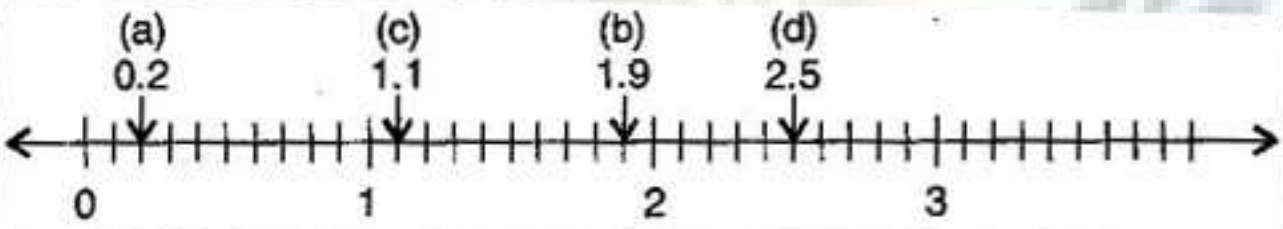
(a) 0.2

(b) 1.9

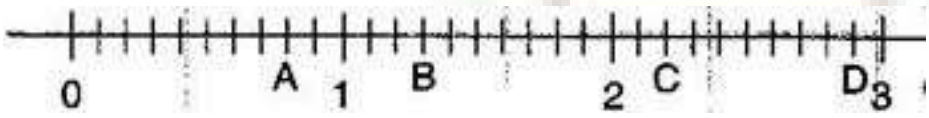
(c) 1.1

(d) 2.5

Answer:



Question 9. Write the decimal number represented by the points A, B, C, D:



Answer: A = 0 + $\frac{8}{10}$ = 0.8

B = 1 + $\frac{3}{10}$ = 1.3

C = 2 + $\frac{2}{10}$ = 2.2

D = 2 + $\frac{9}{10}$ = 2.9

Question 10. (a) The length of Ramesh's notebook is 9 cm and 5 mm. What will be its length in cm?

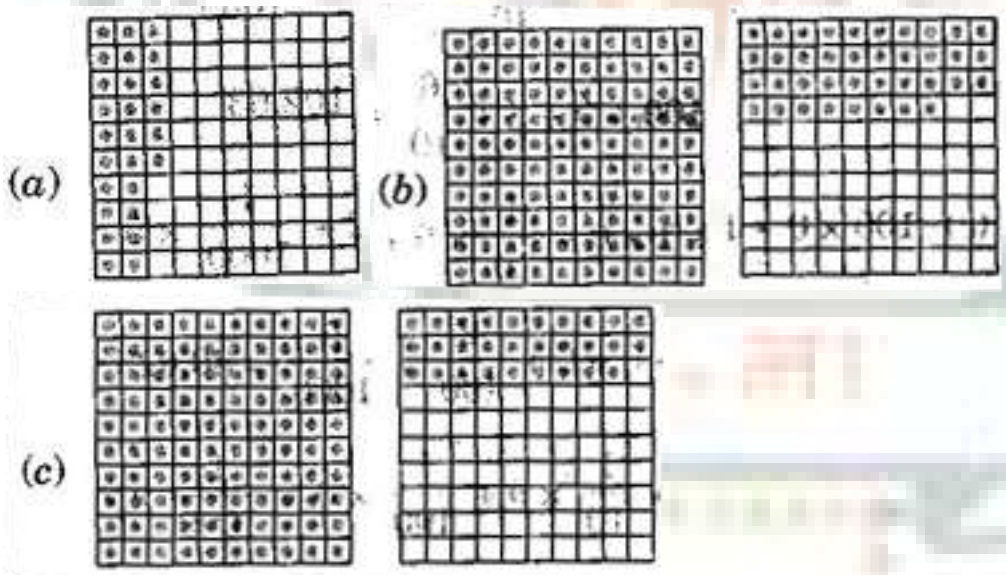
(b) The length of a young gram plant is 65 mm. Express its length in cm.

Answer: (a) 9 cm 5 mm = 9 cm + 5 mm = 9 + $\frac{5}{10}$ = 9.5 cm

(b) 65 mm = $\frac{65}{10}$ cm = 6.5 cm

Ex. 8.2

Question 1. Complete the table with the help of these boxes and use decimals to write the number:



	Ones	Tenths	Hundredth	Numbers
(a)				
(b)				
(c)				

Answer:

	Ones	Tenths	Hundredths	Numbers
(a)	1	2	6	0.26
(b)				
(c)	1	3	8	1.38

(C) 1 2 9 1.29

Question 2. Write the numbers given in the following place value table in decimal form:

	Hundreds	Tens	Ones	Tenths	Hundredth	Thousandths
	100	10	1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
(a)	0	0	3	2	5	0
(b)	1	0	2	6	3	0
(c)	0	3	0	0	2	5
(d)	2	1	1	9	0	2
(e)						

Answer: (a) $0 \times 100 + 0 \times 10 + 3 \times 1 + 2 \times \frac{1}{10} + 5 \times \frac{1}{100} + 0 \times \frac{1}{1000}$

$= 0 + 0 + 3 + 0.2 + 0.05 + 0 = 3.25$

(b) $1 \times 100 + 0 \times 10 + 2 \times 1 + 6 \times \frac{1}{10} + 3 \times \frac{1}{100} + 0 \times \frac{1}{1000}$

$= 100 + 0 + 2 + 0.6 + 0.03 + 0 = 102.63$

(c) $0 \times 100 + 3 \times 10 + 0 \times 1 + 0 \times \frac{1}{10} + 2 \times \frac{1}{100} + 5 \times \frac{1}{1000}$

$= 0 + 30 + 0 + 0 + 0.02 + 0.005 = 30.025$

(d) $2 \times 100 + 1 \times 10 + 1 \times 1 + 9 \times \frac{1}{10} + 0 \times \frac{1}{100} + 2 \times \frac{1}{1000}$

$= 200 + 10 + 1 + 0.9 + 0 + 0.002 = 211.902$

(e) $0 \times 100 + 1 \times 10 + 2 \times 1 + 2 \times \frac{1}{10} + 4 \times \frac{1}{100} + 1 \times \frac{1}{1000}$

$0 + 10 + 2 + 0.2 + 0.04 + 0.001 = 12.241$

Question 3. Write the following decimals in the place value table:

(a) 0.29

(b) 2.08

(c) 19.60

(d) 148.32

(e) 200.812

Answer:

	Numbers	Hundreds	Tens	Ones	Tenths	Hundredth	Thousandths
		100	10	1	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
(a)	0.29	0	0	0	2	9	0
(b)	2.08	0	0	2	0	8	0
(c)	19.60	0	1	9	6	0	0
(d)	148.32	1	4	8	3	2	0
(e)	200.812	2	0	0	8	1	2

Question 4. Write each of the following as decimals:

(a) $20 + 9 + \frac{4}{10} + \frac{1}{100}$

(b) $137 + \frac{5}{100}$

(c) $\frac{7}{10} + \frac{6}{100} + \frac{4}{1000}$

(d) $23 + \frac{2}{10} + \frac{6}{1000}$

(e) $700 + 20 + 5 + \frac{9}{100}$

Answer: (a) 20 + 9 + 0.4 + 0.01 = 29.41

(b) 137 + 0.05 = 137.05

(c) 0.7 + 0.06 + 0.004 =0.764

(d) 23 + 0.2 + 0.006 = 23.206

(e) 700 + 20 + 5 + 0.09 = 725.09

Question 5. Write each of the following decimals in words:

(a) 0.03

(b) 1.20

(c) 108.56

(d) 10.07

(e) 0.032

(f) 5.008

Answer: (a) Zero point zero three

(b) One point two zero

(c) One hundred and eight point five six

(d) Ten point zero seven

(e) Zero point zero three two

Five point zero zero eight

Question 6. Between which two numbers in tenths place on the number line does each of the given number lie?

(a) 0.06

(b) 0.45

(c) 0.19

(d) 0.66

(e) 0.92

(f) 0.57

Answer: All the numbers lie between 0 and 1.

(a) 0.06 is nearer to 0.1.

(b) 0.45 is nearer to 0.5.

(c) 0.19 is nearer to 0.2.

(d) 0.66 is nearer to 0.7.

(e) 0.92 is nearer to 0.9.

(f) 0.57 is nearer to 0.6.

Question 7. Write as fractions in lowest terms:

(a) 0.60

(b) 0.05

(c) 0.75

(d) 0.18

(e) 0.25

(f) 0.125

(g) 0.066

Answer: (a) 0.60 = $\frac{60}{100} = \frac{3}{5}$

(b) 0.05 = $\frac{5}{100} = \frac{1}{20}$

(c) 0.75 = $\frac{75}{100} \equiv \frac{3}{4}$

(d) 0.18 = $\frac{18}{100} = \frac{9}{50}$

(e) 0.25 = $\frac{25}{100} = \frac{1}{4}$

(f) 0.125 = $\frac{125}{1000} = \frac{1}{8}$

(g) 0.066 = $\frac{66}{1000} = \frac{33}{500}$

Ex. 8.3

Question 1. Which is greater:

(a) 0.3 or 0.4

(b) 0.07 or 0.02

(c) 3 or 0.8 (d) 0.5 or

0.05 (e) 1.23 or1.2

(f) 0.099 or 0.19

(g) 1.5 or 1.50

(h) 1.431 or 1.490

(i) 3.3 or 3.300

(j) 5.64 or 5.603

Answer: Before comparing, we write both terms in like decimals: (a) 0.3 <

0.4

(b) 0.07 > 0.02

(c) 3.0 or 0.8 $\Rightarrow$ 3.0 > 0.8

(d) 0.50 or 0.05 $\Rightarrow$ 0.50 > 0.05

(e) 1.23 or 1.20 $\Rightarrow$ 1.23 > 1.20

(f) 0.099 or 0.190 $\Rightarrow$ 0.099 < 0.190

(g) 1.50 or 1.50 $\Rightarrow$ 1.50 = 1.50

(h) 1.431 < 1.490

(i) 3.300 or 3.300 $\Rightarrow$ 3.300 = 3.300

(j) 5.640 or 5.603 $\Rightarrow$ 5.640 > 5.603

Question 2. Make five more examples and find the greater:

(a) 1.8 or 1.82

(b) 1.0009 or 1.09

(c) 10.01 or 100.1

(d) 5.100 or 5.0100

(e) 04.213 or 0421.3

Answer: Before comparing, we write both the terms in like decimals

(i) 1.80 or 1.82 $\Rightarrow$ 1.82 is greater than 1.8

(ii) 1.0009 or 1.0900 $\Rightarrow$ 1.09 is greater than 1.0009

(iii) 10.01 or 100.10 $\Rightarrow$ 100.1 is greater than 10.01 (iv)

5.1000 or 5.0100 $\Rightarrow$ 5.100 is greater than 5.0100

(v) 04.213 or 0421.300 ⇒ 0421.3 is greater than 04.213

Ex. 8.4

Question 1. Express as rupees using decimals:

(a) 5 paise

(b) 75 paise

(c) 20 paise

(d) 50 rupees 90 paise

(e) 725 paise

Answer: (a) ∵ 1 paisa = Rs. $\frac{1}{100}$

∴ 5 paise = $\frac{1}{100}$ x 5 = Rs. 0.05

(b) ∵ 1 paisa = Rs. $\frac{1}{100}$

∴ 75 paise = $\frac{1}{100}$ x 5 = Rs. 0.75

(c) ∵ 1 paisa = Rs. $\frac{1}{100}$

∴ 20 paise = $\frac{1}{100}$ x 5 = Rs. 0.05

(d) ∵ 1 paisa = Rs. $\frac{1}{100}$

∴ Rs. 50 + 90 paise = 50 + $\frac{1}{100}$ x 90 = Rs. 50.90

(e) ∵ 1 paisa = Rs. $\frac{1}{100}$

∴ 725 paise = $\frac{1}{100}$ x 725 = $\frac{725}{100}$ = Rs. 7.25

Question 2. Express as meters using decimals:

(a) 15 cm

(b) 6 cm

(c) 2 m 45 cm

(d) 9 m 7 cm

(e) 419 cm

Answer: (a) $\because \quad 1\,\text{cm} = \frac{1}{100}\ \text{m}$

$\therefore \quad 15\,\text{cm} = \frac{1}{100} \times 15 = 0.15\,\text{m}$

(b) $\because \quad 1\,\text{cm} = \frac{1}{100}\ \text{m}$

$\therefore \quad 6\,\text{cm} = \frac{1}{100} \times 6 = 0.06\,\text{m}$

(c) $\because \quad 1\,\text{cm} = \frac{1}{100}\ \text{m}$

$\therefore \quad 2\,\text{m}\,45\,\text{cm} = 2 + \frac{1}{100} \times 45 = 2.45\,\text{m}$

(d) $\because \quad 1\,\text{cm} = \frac{1}{100}\ \text{m}$

$\therefore \quad 9\,\text{m}\,7\,\text{cm} = 9 + \frac{1}{100} \times 7 = 9.07\,\text{m}$

(e) $\because \quad 1\,\text{cm} = \frac{1}{100}\ \text{m}$

$\therefore \quad 419\,\text{cm} = \frac{1}{100} \times 419 = \frac{419}{100} = 4.19\,\text{m}$

Question 3. Express as cm using decimals:

(a) 5 mm

(b) 60 mm

(c) 164 mm

(d) 9 cm 8mm

(e) 93 mm

Answer: (a) $\because$ 1 mm = $\frac{1}{10}$ cm

$\therefore$ 5 mm = $\frac{1}{10}$ x 5 = 0.5 cm

(b) $\because$ 1 mm = $\frac{1}{10}$ cm

$\therefore$ 60 mm = $\frac{1}{10}$ x 60 = 6 cm

(c) $\because$ 1 mm = $\frac{1}{10}$ cm

$\therefore$ 164 mm = $\frac{1}{10}$ x 164 = 16.4 cm

(d) $\because$ 1 mm = $\frac{1}{10}$ cm

$\therefore$ 9 cm 8 mm = 9 + $\frac{1}{10}$ x 8 = 9 + 0.8 = 9.8 cm

(e) $\because$ 1 mm = $\frac{1}{10}$ cm

$\therefore$ 93 mm = $\frac{1}{10}$ x 93 = 9.3 cm

Question 4. Express as km using decimals:

(a) 8 m

(b) 88 m

(c) 8888 m

(d) 70 km 5 m

Answer: (a) $\because$ 1 m = $\frac{1}{1000}$ km

$\therefore$ 8 m = $\frac{1}{1000}$ x 8 = 0.008 km

(b) $\because$ 1 m = $\frac{1}{1000}$ km

$\therefore$ $88\,\text{m} = \frac{1}{1000} \times 88 = 0.088\,\text{km}$

(c) $1\,\text{m} = \frac{1}{1000}$ km

$\therefore$ $8888\,\text{m} = \frac{1}{1000} \times 8888 = 8.888\,\text{km}$

(d) $1\,\text{m} = \frac{1}{1000}$ km

$\therefore$ $70\,\text{km}\,5\,\text{m} = 70 + \frac{1}{1000} \times 5 = 70.005\,\text{km}$

Question 5. Express as kg using decimals:

(a) 2 g

(b) 100 g

(c) 3750 g

(d) 5 kg 8g

(e) 26 kg 50g

Answer: (a) $1\,\text{g} = \frac{1}{1000}$ kg

$\therefore$ $2\,\text{g} = \frac{1}{1000} \times 2 = 0.002\,\text{kg}$

(b) $1\,\text{g} = \frac{1}{1000}$ kg

$\therefore$ $100\,\text{g} = \frac{1}{1000} \times 100 = 0.1\,\text{kg}$

(c) $1\,\text{g} = \frac{1}{1000}$ kg

$\therefore$ $3750\,\text{g} = \frac{1}{1000} \times 3750 = 3.750\,\text{kg}$

$\therefore$ $5\,\text{kg}\,8\,\text{g} = 5 + \frac{1}{1000} \times 8 = 5.008\,\text{kg}$

(d) $1\,\text{g} = \frac{1}{1000}$ kg

$\therefore \quad 5\,\text{kg}\,8\,\text{g} = 5 + \frac{1}{1000} \times 8 = 5.008\,\text{kg}$

(e) $1\,\text{g} = \frac{1}{1000}\,\text{kg}$

$\therefore \quad 26\,\text{kg}\,50\,\text{g} = 26 + \frac{1}{1000} \times 50 = 26.050\,\text{kg}$

Ex. 8.5

Question 1. Find the sum in each of the following:

(a) 0.007 + 8.5 + 30.08

(b) 15 + 0.632 + 13.8

(c) 27.076 + 0.55 + 0.004

(d) 25.65 + 9.005 + 3.7

(e) 0.75 + 10.425 + 2

(f) 280.69 + 25.2 + 38

Answer:

(a)38.587 (b)

29.432

(c) 27.630

(d)38.355

(e) 13.175

(f) 343.89

Question 2. Rashid spent Rs. 35.75 for Maths book and Rs. 32.60 for Science book. Find the total amount spent by Rashid.

Answer: Money spent for Maths book = Rs. 35.75

Money spent for Science book = Rs. 32.60

Total money spent = Rs. 35.75 + Rs. 32.60 = Rs. 68.35 Therefore, total money spent by Rashid is Rs. 68.35

Question 3. Radhika's mother gave her Rs. 10.50 and her father gave her Rs. 15.80. Find the total amount given to Radhika by her parents.

Answer: Money given by her mother = Rs. 10.50

Money given by her father = Rs. 15.80

Total money received by Radha = Rs. 10.50 + Rs. 15.80 = Rs. 26.30

Therefore, total money received by Radha is Rs. 26.30.

Question 4. Nasreen bought 3 m 20 cm cloth for her shirt and 2 m 5 cm cloth for her trouser. Find the total length of cloth bought by her.

Answer: Cloth bought for shirt = 3 m 20 cm = 3.20 m

Cloth bought for trouser = 2 m 5 cm = 2.05 m

Total length of cloth bought by Nasreen = 3.20 m + 2.05 m = 5.25 m

Therefore, total length of cloth bought by Nasreen is 5.25 m

Question 5. Naresh walked 2 km 35 m in the morning and 1 km 7 m in the evening. How much distance did he walk in all?

Answer: Distance travelled in the morning = 2 km 35 m = 2.035 km

Distance travelled in the evening = 1 km 7 m = 1.007 km

Total distance travelled = 2.035 km + 1.007 km = 3.042 km Therefore,

total distance travelled by Naresh is 3.042 km.

Question 6. Sunita travelled 15 km 268 m by bus, 7 km 7 m by car and 500 m on foot in order to reach her school. How far is her school from her residence?

Answer: Distance travelled by bus = 15 km 268 m = 15.268 km

Distance travelled by car = 7 km 7 m = 7.007 km

Distance travelled on foot = 500 m = 0.500 km

Total distance travelled = 15.268 m + 7.007 m + 0.500 m = 22.775 km

Therefore, total distance travelled by Sunita is 22.775 km.

Question 7. Ravi purchases 5 kg 400 g rice, 2 kg 20 g sugar and 10 kg 850 g flour. Find the total weight of his purchases.

Answer: Weight of Rice = 5 kg 400 g = 5.400 kg

Weight of Sugar = 2 kg 20 g = 2.020 kg

Weight of Flour = 10 kg 850 g = 10.850 kg

Total weight = 5.400 kg + 2.020 kg + 10.850 kg = 18.270 kg

Therefore total weight of Ravi's purchase = 18.270 kg.

Ex. 8.6

Question I. Subtract: (a) 18.25 from 20.75

(b) 202.54 m from 250 m

(c) 5.36 from8.40

(d) 2.051 km from 5.206 km

(e) 0.314 kg from 2.107kg

Answer: (a) Rs. 2.50

(b) 47.46 m

(c) Rs. 3.04

(d) 3.155 km

(e) 1.793 kg

Question 2. Find the value of:

(a) 9.756 – 6.28

(b) 21.05 – 15.27

(c) 18.5 – 6.79

(d) 11.6 – 9.847

Answer: (a) 3.476

(b) 5.78

(c) 11.71

(d) 1.753

Question 3. Raju bought a book of Rs. 35.65. He gave Rs. 50 to the shopkeeper. How much money did he get back from theshopkeeper?

Answer: Total amount given to the shopkeeper = Rs. 50

Cost of book = Rs. 35.65

Amount left = Rs. 50.00 = Rs. 35.65 = Rs. 14.35 Therefore,

Raju got back Rs. 14.35 from the shopkeeper.

Question 4. Rani had Rs. 18.50. She bought one ice-cream for Rs. 11.75. How much money does she have now?

Answer: Total money = Rs. 18.50

Cost of Ice-cream = Rs. 11.75

Amount left = Rs. 18.50 – Rs. 11.75 = Rs. 6.75

Therefore, Rani has Rs. 6.75 now.

Question 5. Tina had 20 m 5 cm long cloth. She cuts 4 m 50 cm length of cloth from this for making a curtain. How much cloth is left with her?

Answer: Total length of the cloth = 20 m 5 cm = 20.05 m

Length of the cloth used = 4 m 50 cm = 4.50 m Remaining

cloth = 20.05 m – 4.50 m = 15.55 m Thereofre, 15.55 m of

cloth is left with Tina.

Question 6. Namita travels 20 km 50 m every day. Out of this she travels 10 km 200 m by bus and the rest by auto. How much distance does she travel by auto?

Answer: Total distance to travel everyday = 20 km 50 m = 20.050 km

Distance travelled by bus = 10 km 200 m = 10.200 km

Distance travelled by auto = 20.050 km – 10.200 km = 9.850 km

Therefore, 9.850 km distance is travelled by auto everyday.

Question 7. Aakash bought vegetables weighing 10 kg. Out of this 3 kg 500 g in onions, 2 kg 75 g

is tomatoes and the rest is potatoes. What is the weight of the potatoes?

Answer: Weight of onions = 3 kg 500 g = 3.500 kg

Weight of tomatoes = 2 kg 75 g = 2.075 kg

Total weight of onions and tomatoes = 3.500 kg + 2.075 kg = 5.575 kg

Therefore, weight of potatoes = 10.000 kg – 5.575 kg= 4.425 kg Thus,

weight of potatoes is 4.425kg.